UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

Mail Stop 6010

June 28, 2005

Mr. John Cousins
Chief Financial Officer
Advanced Optics Electronics, Inc.
8301 Washington NE
Suite 5
Albuquerque, New Mexico 87113

RE: Advanced Optics Electronics, Inc.
Form 10-KSB for the fiscal year ended December 31, 2004
Filed April 04, 2005
Form 10-QSB for the quarter ended March 31, 2005
File No. 000-24511

Dear Mr. John Cousin:

We have reviewed your response to our letter dated May 5, 2005 and have the following additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-KSB for the year December 31, 2004

General

1. Please provide the amended Form 10-KSB referred to in your cover letter for our review. Please also consider the following additional comments in preparing the revised document.

Item 6. Management's Discussion and Analysis of Financial Condition and Results of Operations, pages 13-16

2. We refer to response to comment 3. Confirm that the monthly cash burn totaling $170,000 includes both Advanced Optics and Biomoda. Otherwise, please expand to address the cash requirements of both businesses.

Results of Continuing Operations

Loss on Contract, page 14

3. Please expand the proposed disclosure to also clarify why you were not able to successfully complete the project. Describe the underlying factors leading to the cost overruns and ultimate cancellation of the project.

Operating Expenses, page 15

4. We see your response to comment 5; however, you should provide some discussion of changes in the components of operating expenses. You should clarify how your expenditures are contributing to achievement of your business plan, including discussion of substantive reasons for changes in the components of expenses from period to period. That is, your disclosure should describe the business reasons for changes in the amounts and components of operating expenses from period to period.

5. As a related matter, to the extent necessary for an understanding of your operating results and progress on business plans, you should provide disaggregated

discussion for the two separate and distinct businesses included in your financial statements.

6. We note your responses to prior comments 6 and 14; however, the derivation of the gain in 2003 and loss in 2004 on conversion of debentures continues to be unclear. Provide us a schedule demonstrating the detailed calculation of the gain and loss. Explain the terms of conversion and show us how the number of shares issued conforms to those terms.

Financial Statements

Note 1. Organization and Summary of Significant Accounting Policies, page F-6

Organization and Nature of Operations, page F-6

7. We presume that the Form 10-KSB will include information substantially similar to that in the response to comment 9. Please confirm.

Note 3. Patents (Intangible Assets), page F-15

8. We refer to prior comment 10. We understand that the carrying amounts for patents might change if you incur additional legal fees; however, the Form 10-KSB should present all relevant disclosures required by SFAS 142. Please expand.

Note 5. Investment in Genomed, Inc., page F-16

9. We refer to the response to comment 11. As set forth in footnote 2 to SFAS 115 a restricted security becomes subject to the marketable securities accounting guidance when the restriction lapses within one year. It appears that you were within that one window as of December 31, 2004. Either revise the 10-K for 2004 to account for the investment as a marketable security under SFAS 115 or advise why the guidance from SFAS 115 is not applicable. You should also consider the impact of this comment on the amount of comprehensive income reported for the quarter ended March 31, 2005.

Note 11. Stockholders' Equity, page F-20

10. We note your responses to and proposed disclosure from prior comments 15 and 16. With respect to transactions where shares were issued for services or other non-cash consideration, the footnote should provide a reasonably specific description of what you received in return. For instance, a description of the nature of the service received. Also clarify how you determined the fair value of the 47 million shares issued for services in 2004. Please expand the proposed disclosure.

Form 10-QSB for the quarter ended March 31, 2005

Item 3. Controls and Procedures, page 7

11. We see that the Chief Executive Officer and Chief Financial Officer evaluated disclosure controls and procedures as of a date within 90 days before the filing date of the quarterly report. Amend to disclose management's conclusion regarding the effectiveness of disclosure controls and procedures as of the end of the period covered by the quarterly report. Refer to Item 307 of Regulation S-B and Part II.F of "Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports" (Release No. 33-8238).

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please file your cover letter on EDGAR. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Patrick Enunwaonye, Staff Accountant, at (202) 551-3645 or me, at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. In this regard, do not hesitate to contact Brian Cascio, Accounting Branch Chief , at (202) 551-3676 with any other concerns.

Sincerely,

Gary Todd
Review Accountant